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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,323	11/18/2003	Chien-Hsiung Lee	1970-4	5244

7590

11/16/2004

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EXAMINER

COCKS, JOSIAH C

ART UNIT

PAPER NUMBER

3749

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/716,323

Applicant(s)

LEE ET AL.

Examiner

Josiah Cocks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/15/04 & 4/8/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings filed on 11/18/2003 are accepted by the examiner.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 2, 7-9, 11, 13-15, 17, 19, and 20, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,809,523 to Vandenberg ("Vandenberg") in view of U.S. Patent No. 4,448,039 to Hutchins ("Hutchins")

Vandenberg discloses in Figures 1-5 a passive energy saving system for a building similar to that described in applicant's claims 1, 2, 7-9, 11, 13-15, 17, 19, and 20. In particular, Vandenberg discloses a solar collector (2) with a heat absorbing plate (see Fig. 1), a heat exchanger (12a, 12b, 12c) a first reservoir (22) including cooling water mounted in the roof of a house, a first pipeline (13) connecting the heat exchanger to the first reservoir, a heat accumulator (10) and a second pipeline (11) connecting the heat exchanger and the accumulator. Vandenberg also discloses an air circulation module with an air inlet, air outlet and a heat-exchanging pipe (see col. 10, lines 10-33). A solar energy collector assembly (2) is arranged to receive sunlight and heat and cold storage tanks (30) and hot water supply tanks (40) are arranged to provide hot water for circulation throughout the building (see col. 10, lines 35-52). The heat and cold storage tanks are shown as being located underground and are considered to be second reservoirs wherein a pump (14) circulates cold water from these reservoirs through the system including into first reservoir (22). The solar collector assembly also includes appropriate valving and by-pass line structure as recited in applicant's claims (see col. 12, line 1 through col. 13, lines 57) and

While Vandenberg discloses a heat accumulator (10), he possibly does not disclose that the heat accumulator is in the form of a heat-absorbing board that absorbs air heat in the building and is located below the heat exchanger that is located below the first reservoir.

Hutchins discloses a solar heating and cooling system in the same field of endeavor as Vandenberg. In Hutchinson, the system includes a solar collector (10) and is connected to a reservoir (37) with a heat exchanger assembly (20) arranged below the reservoir. A cooling evaporator (34) in the form of a board is located, at least partially, beneath the heat exchanger

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(20). This cooling evaporator functions to absorb heat by withdrawing heat from a desired area by using a fluid (see col. 7, lines 46-64) and is considered the heat-absorbing board recited in applicant's claims. Hutchins also shows appropriate valving and pipelines between the components of the solar collector (see Fig. 1 and col. 5, lines 55-65).

Therefore, in regard to claims 1, 2, 7-9, 11, 13-15, 17, 19, and 20, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the energy saving system of Vandenberg to incorporate the heat absorbing board/cooling evaporator of Hutchins desirably allows for the removal of heat from an area within the building and adding latent heat to the fluid within the evaporator that is usefully added to recovered heat within the latent heat solar heating and cooling system (see Hutchins, col. 5, lines 28-40).

5. Claims 3-6, 10, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vandenberg in view of Hutchins as applied to claim 1 above, and further in view of U.S. Patent No. 5,400,607 to Cayce ("Cayce").

Vandenberg in view of Hutchins teach all the limitations of claims 3-6, 10, and 16, except for a cooling module positioned on a window of a building wherein the module includes a cooler, third pipeline, and a photo catalyst filter and an active carbon filter or an air circulation module with an air purifier.

Cayce discloses an air ventilation cooling system that includes an air-cooling and circulation module with a cooler and appropriate pipeline and valving structure (see Fig. 1). The module also includes the use of air purification means in the form of filters (14). The examiner considers that a person of ordinary skill in the art would reasonably select known filter types for

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the filters of Cayce, such as photo catalyst and active carbon filters, and therefore these filter types are not considered to patentably distinguish applicant's invention. In regard to the recitation that the cooling module is position don a window of the building, the examiner considers that since the system of Cayce is intended to receive outside air a person of ordinary skill in the art would reasonably select a location that receives a flow of outside air, such as a window. This limitation as to system location is considered simply a matter of obvious matter of design choice absent the showing of some new or unexpected results over the prior art of record.

Therefore, in regard to claims 3-6, 10, and 16, it would have been obvious to a person of ordinary skill in the art to modify the energy saving system of Vandenberg to incorporate the ventilation and cooling module of Cayce for the desirable purpose of providing a highly efficient system of supplying outside ventilation air cooling to buildings (see Cayce, col. 3, line 65 through col. 4, line 7).

6. Claims 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vandenberg in view of Hutchins as applied to claims 11 and 17 above, and further in view of U.S. Patent No. 3,853,114 to Gaydos, Jr. ("Gaydos").

Vandenberg in view of Hutchins teach all the limitations of claims 12 and 18 except for a plurality of helical coils connected to the heat absorbing plate.

Gaydos teaches a solar heat absorber analogous to that of Vandenberg wherein the absorber forms what the examiner considers a plate that includes helical coils (30) (see Fig. 1).

Therefore, in regard to claims 12 and 18, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the solar collector of

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Vandenberg to include the helical coils of Gaydos as the helical coils allow a greater amount of fluid to be present in the collector for heating at any given time (see Gaydos, col. 2, lines 41-45).

Conclusion

7. This action is made non-final. A THREE month shortened statutory period for reply has been set. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) months from the mailing date of this communication.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents to Newton, White, Peacock et al., and German Patent DE 195 33 475 are included to further show the state of the art concerning energy saving systems.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Any questions on access to the Private PAIR system should be directed to the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Josiah Cocks whose telephone number is (703) 305-0450. The examiner can normally be reached on weekdays from 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus, can be reached at (703) 308-1935. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

jcc
November 9, 2004


JOSIAH COCKS
PRIMARY EXAMINER
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